

**We Claim:**

1           1.       A method of manufacturing metal fins suitable for use in a heat  
2       exchanger which comprises:  
3           (a) providing a coated patterned fin stock having a series of parallel stripes  
4       disposed longitudinally across the width of said fin stock, with said stripes being  
5       evenly spaced apart in the central portion of said fin stock, and staggered or more  
6       further spaced apart at the edges of said fin stock;  
7           (b) passing said fin stock through a series of forming dies to form or draw a  
8       plurality of tube receiving collared holes in said fin stock; and  
9           (c) slitting or cutting said fin stock longitudinally to form a plurality of fin  
10      strips, and whereby said staggered spacing compensates for transverse movement of  
11      the fin stock during the drawing operation, and assures for accurate positioning of  
12      the collars between said coated stripes.

1           2.       A method of manufacturing metal fins suitable for use in a heat  
2       exchanger which comprises:  
3           (a) providing a decorative coated patterned fin stock having a series of  
4       parallel stripes disposed longitudinally across the width of said fin stock on one  
5       surface thereof, with said stripes being evenly spaced apart in the central portion of  
6       said fin stock, and staggered or more further spaced apart at both edges of said fin  
7       stock;  
8           (b) passing said fin stock through a series of forming dies to form or draw a  
9       plurality of tube receiving collared holes in said fin stock with said collared holes  
10      being positioned between two adjacent stripes; and  
11           (c) slitting or cutting said fin stock longitudinally to form a plurality of fin  
12      strips, and whereby said staggered spacing compensates for transverse movement of  
13      the fin stock during the drawing operation, and assures for accurate positioning of  
14      the collars between said coated stripes.

1           3.       A method of manufacturing metal fins suitable for use in a heat  
2       exchanger which comprises:

3 (a) providing a coated patterned fin stock having a width defined by two  
4 parallel edges, and a top and bottom surface with a series of parallel stripes disposed  
5 longitudinally across the width of the bottom surface of said fin stock, with said  
6 stripes being evenly spaced apart in the central portion of said fin stock, and  
7 staggered or more further spaced apart at the edges of said fin stock;

8 (b) passing said fin stock through a series of forming dies to form or draw a  
9 plurality of tube receiving collared holes in the top surface of said fin stock; and

10 (c) slitting or cutting said fin stock longitudinally to form a plurality of fin  
11 strips, and whereby said staggered spacing compensates for transverse movement of  
12 the fin stock during the drawing operation, and assures for accurate positioning of  
13 the collars between said coated stripes.

1 4. A heat exchanger having a high fin density coil design comprising a series of  
2 parallelly spaced fins and a plurality of fluid carrying tubes penetrating said series of  
3 parallelly spaced fins, each of said fins having an uncoated central area and stripes  
4 of a coating material along outer edge areas thereof, said central areas of said fins  
5 having a plurality spaced holes, said holes having surrounding collars which are  
6 uncoated on the inside surface area, and said tubes being in an assembled array, with  
7 each of said tubes passing through said holes in said parallelly spaced fins and being  
8 in contact with said uncoated inside surfaces of said collars surrounding said holes.

1 5. The heat exchanger of claim 4 in which the fin density is greater than or  
2 equal to 17 fins per linear inch.

1 6. The heat exchanger of claim 4 in which the fin density is greater than 20 fins  
2 per linear inch.